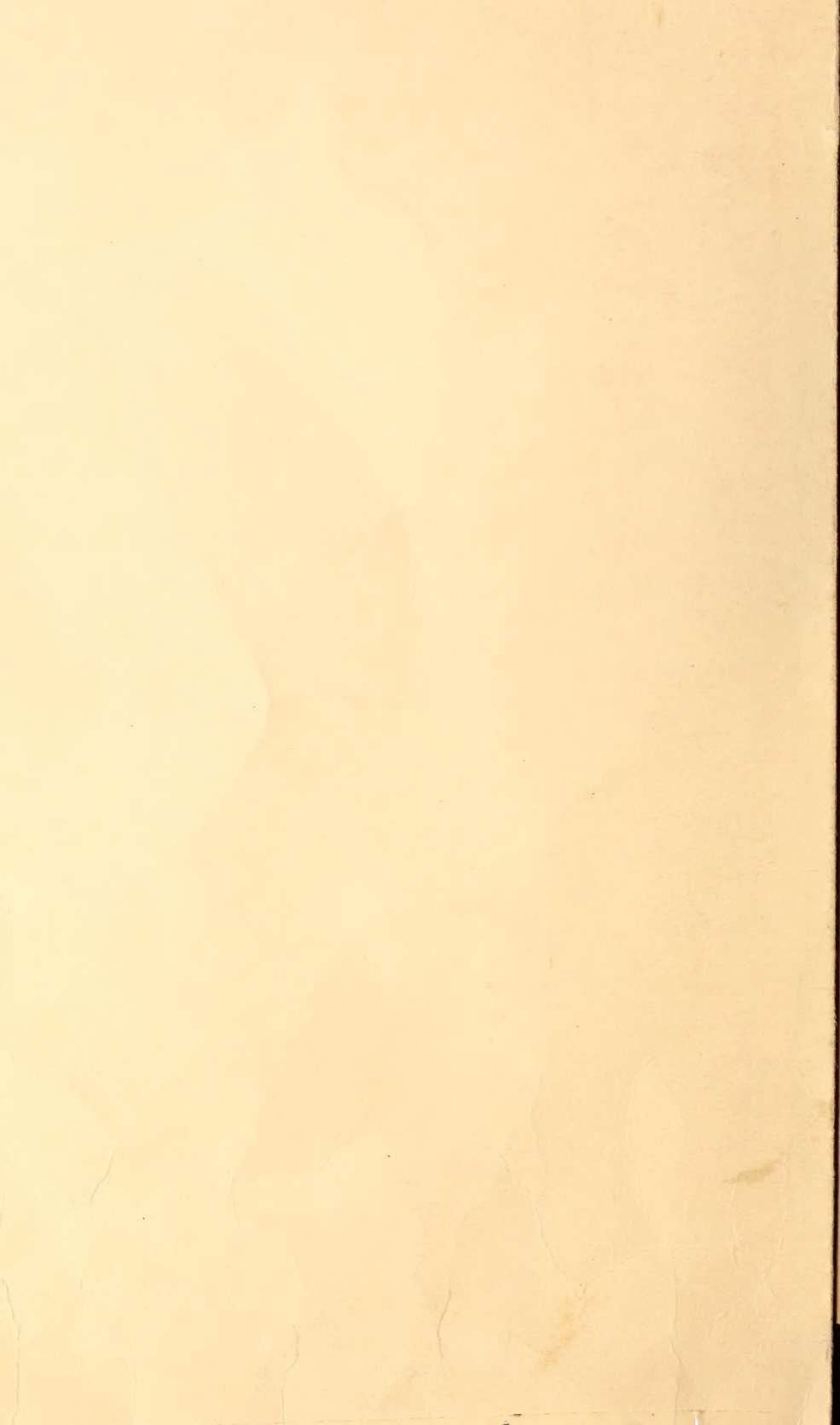


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PLANT INDUSTRY SUB-BRANCH
BELTSVILLE, MARYLAND

The Home
FRUIT GARDEN
*in the East Central and
Middle Atlantic States*



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U. S. DEPARTMENT OF AGRICULTURE

THE HOME FRUIT GARDEN IN THE EAST CENTRAL AND MIDDLE ATLANTIC STATES¹

The National Nutrition Conference, held in Washington, D. C., November 1941, urged Americans to eat more fruit.

Well-ripened, sound fruits increase the healthfulness, variety, attractiveness, and palatability of meals. Despite the relatively large available supplies of fruit, many families, especially on farms, do not have adequate quantities in the diet. In almost every part of this region many kinds of fruits that usually require little or no spraying can be grown successfully in farm or suburban gardens. Fruits that need spraying are not so well suited for home production. By properly selecting the kinds and varieties for home planting a succession of fresh fruits of high dessert quality can be available during much of the summer, and surpluses may be canned, preserved, dried, or in some cases frozen for use during other seasons. Do not let the fruit go to waste. Such home consumption of fruits, together with purchases of kinds that cannot be grown successfully, should improve the diet and general health.

This leaflet lists the best kinds and varieties of fruits and nuts for home planting in the middle region of the eastern United States (fig. 1) and gives brief directions for their care. Detailed information on the culture of other varieties suitable for local conditions in the States within this region can be obtained from the State agricultural colleges or extension services.

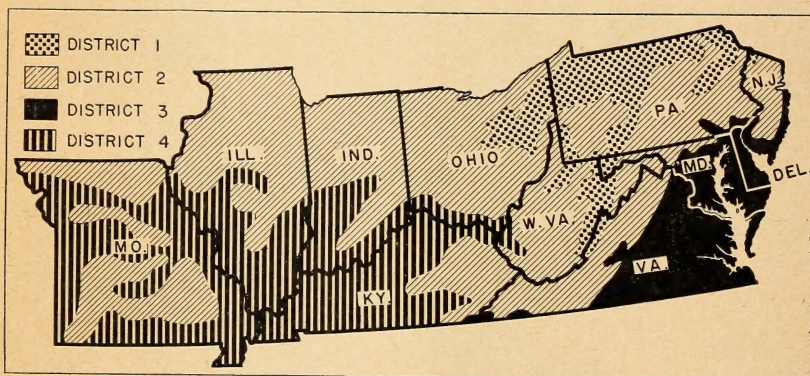


FIGURE 1.—Map of the East Central and Middle Atlantic States showing districts where similar climatic conditions favor the growing of the same fruits and nuts. District 1—Winters severe, growing seasons short, and only the more hardy and early-maturing varieties can be grown satisfactorily. District 2—Somewhat longer growing seasons and more temperate climate than district 1; most standard northern fruit varieties thrive best. District 3—Higher average temperatures and still longer growing seasons; some of the standard northern fruit varieties are less adapted, but some of the less hardy ones can be grown. District 4—Climatic conditions similar to those of district 3, but preference for certain other varieties has become established.

¹ Prepared by the staff of the Division of Fruit and Vegetable Crops and Diseases, Bureau of Plant Industry, Soils, and Agricultural Engineering, with the collaboration of horticulturists of the States in the region. The varieties suggested herein are based on those recommended by these horticulturists. Issued April 1942; slightly revised June 1945.

Climatic Districts for Fruits and Nuts

Summer and winter temperatures, rainfall, and prevalence of diseases and insects are important in determining the fruit and nut varieties that can be grown in the different sections. Although varieties differ greatly in their adaptation, some kinds can be grown in almost every home garden in this region. On the map (fig. 1) the East Central and Middle Atlantic States are divided into districts based chiefly on the length of the growing season. In general, the same fruit and nut varieties can be grown throughout a district.

Kinds and Varieties to Plant

Under most conditions in this region the best fruits for the home garden are, in order of adaptability where spraying is not practical, (1) strawberries, (2) raspberries, (3) blackberries, (4) sour cherries, (5) grapes, (6) some plums and pears, (7) sweet cherries, (8) peaches, and (9) apples. Quinces and blueberries may be grown under some conditions. Currants and gooseberries should be planted only where quarantine regulations permit, that is, where white pines are not important. In certain locations black walnuts, Chinese chestnuts, and filberts may well be included.

In all districts fruit trees are benefited by proper spraying, and in the vicinity of commercial orchards fruit trees in the home garden should be sprayed to prevent the spread of insects and diseases. In almost every section, however, one can grow certain fruits and nuts that do not require spraying and that add greatly to the variety and healthfulness of the diet.

Strawberries are adapted to the greatest number of locations and conditions. They are the first fruit to ripen, are of fine flavor, and have a very high vitamin C content. Even when frozen, strawberries keep their high vitamin C content for many months. Strawberries should be a part of almost every garden. Grapes, which are also adapted to most locations and conditions in this region, are important in the diet. A succession of varieties to furnish fruit over a long period may be selected. More nut trees may well be planted. All are high in food value. Some, like the black walnut and pecan, are well adapted for use as shade trees. The newer named varieties are better than the wild seedlings.

Strawberries, raspberries, blackberries, and grapes cover the season from May or early June till frost. Larger gardens that include the tree fruits will furnish a greater variety of fresh fruit during much of the year. Because yellow peaches and some varieties of plums, fresh, frozen, or preserved, are very rich in vitamin A, they should be grown wherever possible.

The varieties recommended for medium-sized gardens in representative parts of the districts shown in figure 1 are listed in table 1. Some of the varieties suggested are not those that would be recommended for commercial plantings in these districts. Usually more than one variety is listed in order to cover the long season. For example, the Howard 17 (Premier) strawberry ripens early and the Catskill several days later. Blakemore is an excellent variety for preserving, so it is suggested where it is best adapted. Early Harvest is an early, Eldorado a midseason, and Brainerd a late blackberry; these three varieties furnish fruit for at least 2 months. Similarly, Portland, a white grape, and Fredonia, a blue one, are early; Delaware, midseason; and

Concord, later. One or two Montmorency (sour) cherry trees will furnish adequate fruit for canning. The Stanley plum, a prune type, good fresh or canned, comes into bearing early and seems to be widely adapted, whereas the Shropshire plum, a damson, is a good late tart variety suitable for jellies and preserves. Among the pears suggested, Kieffer, although not of high quality, is one of the most dependable for home use, particularly in the southern half of the region. Two or more varieties each of sweet cherries, pears, some plums, black walnuts, Chinese chestnuts, filberts, blueberries, and apples must be planted for cross-pollination and adequate fruit set.

In the more northern districts, 1 and 2, it is best to plant either red or black raspberries, not both, for the red raspberry often has a virus disease that spreads to black raspberries and quickly kills them.

TABLE 1.—Varieties suggested for medium-sized gardens in representative parts of the districts of figure 1

DISTRICT 1 (NORTHERN PENNSYLVANIA AND HIGHLANDS OF MARYLAND, OHIO, AND WEST VIRGINIA)

Fruit	Variety	Month ripe	Plants	Length of row
			Number	Feet
Strawberry	(Howard 17 (Premier)	June	50	100
	Catskill	June to July	50	100
Raspberry	Latham (red)	July	20	50
	Bristol (black)	do	20	50
Grape (in favorable locations)	Delaware	August	3	24
	Niagara	September	3	24
Cherry	Concord	do	3	24
	Montmorency	July	2	30
Plum	Imperial Epineuse	August to September	1	15
	Reine Claude	do	1	15
Pear	Stanley	September	1	15
	Shropshire	do	1	15
Pear	Gorham	do	1	20
	Seckel	do	1	20
Apple	Bartlett	do	1	20
	Lodi	August	1	30
Apple	Wealthy	September	1	30
	McIntosh	do	1	30
Apple	Jonathan	September to October	1	30
	Golden Delicious	October	1	30

DISTRICT 2 (CENTRAL NEW JERSEY, CENTRAL AND SOUTHEASTERN PENNSYLVANIA, WESTERN VIRGINIA AND WEST VIRGINIA, OHIO, CENTRAL INDIANA, CENTRAL ILLINOIS, AND CENTRAL MISSOURI)

Strawberry	(Howard 17 (Premier)	June	25	50
	Catskill	do	25	50
Blackberry	Eldorado	July	10	40
	Chief (red)	June	20	50
Raspberry	Latham (red)	do	20	50
	Cumberland (black)	do	15	60
Blueberry 1	Pioneer	July	3	12
	Stanley	do	4	16
Grape	Pemberton	do	4	16
	Portland	August	3	24
Cherry	Delaware	do	3	24
	Niagara	September	3	24
Plum	Concord	do	3	24
	Montmorency	June	2	30
Pear	Imperial Epineuse	July	1	15
	Stanley	September	1	15
Peach	Shropshire	do	1	15
	Golden Jubilee	July	2	40
Pear	Halehaven	August	2	40
	Elberta	September	2	40
Apple	Gorham	August	1	20
	Seckel	do	1	20
Apple	Duchess	September	1	20
	Kieffer	October	1	20
Apple	Lodi or Yellow Transparent	August	1	30
	Jonathan	September	1	30
Apple	Golden Delicious	do	1	30
	Stayman Winesap	September to October	1	30

TABLE 1.—*Varieties suggested for medium-sized gardens in representative parts of the districts of figure 1—Continued*

DISTRICT 3 (EASTERN MARYLAND, DELAWARE, EASTERN VIRGINIA, AND SOUTHERN NEW JERSEY)

Fruit	Variety	Month ripe	Plants	Length of row
			Number	Feet
Strawberry	Blakemore	May to June	25	50
	Fairfax	do.	25	50
Blackberry	Eldorado	July	10	40
Dewberry	Lucretia	June	5	25
Raspberry	Bristol (black)	do.	15	60
	Latham (red)	June to July	20	50
Currant ²	Potomac (purple)	do.	15	60
	Red Lake	June	5	20
Gooseberry ²	Poorman	do.	2	8
	Glendale	June to July	2	8
Blueberry ¹	Pioneer	do.	3	12
	Scammell	July	4	16
Grape	Stanley	do.	3	12
	Portland	August	3	24
Cherry	Niagara	August to September	3	24
	Concord	do.	3	24
Plum	Montmorency	June	2	30
	Santa Rosa	July	1	15
Peach	Methley	do.	1	15
	Stanley	August to September	1	15
Pear	Shropshire	September	1	15
	Golden Jubilee	July	2	40
Apple	Halehaven	August	2	40
	Elberta	do.	2	40
Peach	Seckel	September	2	40
	Waite	September to October	1	20
Pear	Kieffer	October	1	20
	Lodi	June to July	1	30
Apple	Jonathan	August to September	1	30
	Golden Delicious	September	1	30
	Stayman Winesap	October	1	30

DISTRICT 4 (WESTERN KENTUCKY, SOUTHERN INDIANA, SOUTHERN ILLINOIS, AND SOUTHEASTERN MISSOURI)

Strawberry	Blakemore	May to June	50	100
	Catskill	do.	50	100
Blackberry	Early Harvest	June	30	120
	Eldorado	July	30	120
Raspberry	Brainerd	July to August	5	40
	Latham (red)	June to July	20	50
Currant ²	Cumberland (black)	June	15	60
	Red Lake	do.	10	40
Gooseberry ²	Glendale	do.	5	20
	Portland	August	3	24
Grape	Fredonia	do.	3	24
	Niagara	August to September	3	24
Cherry	Concord	do.	3	24
	Montmorency	June	3	45
Plum	Underwood	August	1	15
	Stanley	August to September	1	15
Peach	Shropshire	September	1	15
	Golden Jubilee	July	2	40
Pear	Halehaven or South Haven	August	2	40
	Belle of Georgia	do.	2	40
Apple	Seckel	September to October	2	40
	Waite	do.	2	40
Peach	Kieffer	October	2	40
	Yellow Transparent	June to July	2	60
Apple	Jonathan	August to September	2	60
	Golden Delicious	September	2	60

¹ Very acid soils only.² To be grown only where white pines are not important (see p. 3) and on heavy soils.

Good varieties of black walnuts are the Thomas and Ohio, of filberts the Bixby and Buchanan, and of Chinese chestnuts the Carr and Hobson. The planting distances are 40 feet for black walnuts, 30 feet for chestnuts, and 15 feet for filberts. Two each of black walnuts and chestnuts and four of filberts are suggested for all districts. One each of the Major and Posey pecans are suggested for eastern Maryland and Virginia and all of district 4. They should be set about 40 feet

apart. The Celeste fig and the Young dewberry may be grown in eastern Virginia near Norfolk.

Planting and Care

SOURCES OF PLANTS.—No fruits adapted to this region are grown from seed. All are propagated by commercial nurserymen. Names of nurseries can be supplied by the State agricultural extension service.

LOCATION OF PLANTING.—Although it is generally desirable to have the planting near the house and perhaps adjacent to the vegetable garden, this may not be the most favorable location. In general, the planting should not be in a low area but should be on moderately elevated land or on a slope that will provide satisfactory air drainage. In other words, the site should not be frosty. The soil should be reasonably fertile and well-drained. A location where the soil tends to remain wet after rain should be avoided. Where a choice is possible, heavy soils should be selected for currants and gooseberries. Fruit trees, which need full exposure to sunlight, should not be planted near wood lots or shade trees.

SIZE OF PLANTING.—The size of the planting will vary with the space available. In some locations there may be space for only a few grapevines on an arbor or fence, a few fruit or nut trees around the buildings, or a row or two of berries by the fence. On other places the size of the planting is determined by the needs of the family and by the kinds of fruit that can be grown. A half-acre

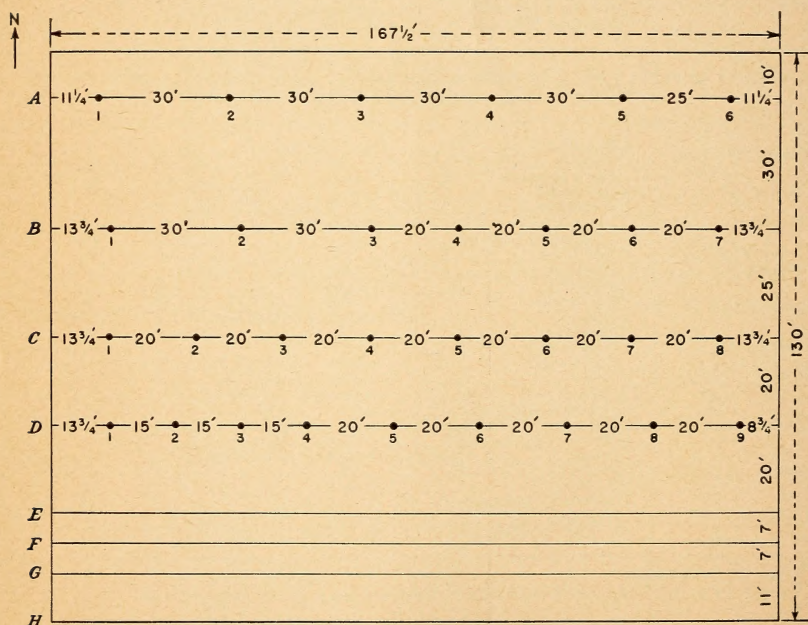


FIGURE 2.—Suggested arrangement for a half-acre fruit and nut garden. Row A, Nos. 1 to 5, apples; No. 6, cherry. Row B, Nos. 1 to 3, Chinese chestnuts; Nos. 4 to 6, plums; No. 7, cherry. Row C, Nos. 1 to 4, pears; Nos. 5 to 8, plums. Row D, Nos. 1 to 4, filberts; Nos. 5 to 9, peaches. Row E, Red raspberry (2 varieties). Row F, Blackberry (1 variety); dewberry (1 variety). Row G, Strawberries (2 varieties). Row H, Grapes (trained on a wire trellis or on a fence used as a trellis). Number of trees or plants may be changed to suit conditions.

garden that includes tree fruits and nuts and furnishes fruit in season for a large family is illustrated in figure 2.

WHEN AND HOW TO PLANT.—Usually a better stand of plants will be obtained by setting them as early in the spring as it is possible to prepare the soil. Equally good results will be obtained by planting fruit trees in the fall. The ground should be prepared as thoroughly as for a vegetable garden. It is important that the plants be entirely dormant, with no buds starting, at time of planting. Also, the roots should never be allowed to dry out. Berries and grapes should be set at the same depth as they grew in the nursery. The fruit and nut trees should be set slightly deeper. The roots should be spread out when the plants are set. When the holes are dug the topsoil and subsoil are separated. The topsoil is placed about the roots of the tree in the holes and the subsoil is used last to fill up the rest of the hole. The soil should be thoroughly firmed about the roots to prevent drying out and to help hold the tree in position.

PRUNING BEFORE PLANTING.—Strawberries should have all fully developed leaves picked off before being planted. The canes of raspberries, blackberries, currants, and gooseberries should be cut back to 6 inches at time of planting. Grapevines are usually cut back, leaving only one or two buds. If fruit trees obtained from the nursery are unbranched whips, they should be headed back to a height of 3 to 3½ feet. If they have several good-sized branches well spaced along the trunk, three or four may be left. The branches should be spaced about a foot apart up and down the trunk and point in different directions.

CULTIVATION.—The cultivation of the home fruit garden is similar to that of the vegetable garden for the first part of the season. After about July 15 cultivation of fruit trees and bushes should cease. Strawberries should be cultivated until the end of the growing season. Under most conditions the same methods of maintaining the fertility of the soil that are followed in a vegetable garden are successful with fruit. Where stable manure is available, its liberal use generally gives excellent results. In the States in this region strawberries should not be fertilized after August or early in September. Strawberries should be mulched with straw to protect them from winter injury. This should be done in the fall after killing frosts, but before it is cold enough to freeze the ground. Straw 1 to 2 inches deep after settling in Maryland and Kentucky and 3 inches deep in central and northern Illinois furnishes the needed protection against cold.

All berry plants should be given clean cultivation as are vegetables unless there is an abundance of straw or other mulching material to furnish a permanent mulch. Fruit trees and grapevines should be given clean cultivation for the first 3 or 4 years if it is not possible to mulch them with straw or strawy manure. Thereafter apples, pears, plums, cherries, grapes, and nuts may be kept in sod. Peaches do best where they receive some cultivation, but they can also be grown in grass and mulched where cultivation cannot be given. Manure mulch will take care of the fertilizer requirements of the fruit plants. When manure is not available, a fertilizer high in nitrogen should be used.

PRUNING AFTER FIRST YEAR.—To many inexperienced growers the question of how to prune trees and bushes appears to be very complicated. If certain basic principles are kept in mind, however, it is possible for even the inexperienced grower to do a highly satisfactory job of pruning. The purpose of pruning is to develop the tree or bush so that it will have maximum strength to carry a load of fruit and maxi-

mum bearing capacity. A safe rule in pruning trees, particularly young trees up to bearing age, is to prune them as little as will accomplish this specific purpose. Cross branches and suckers should be removed and broken or dying limbs cut out. Young trees of most fruits require little pruning before they come into bearing. Pruning of fruit trees in general should be done during the dormant season, preferably in the spring after danger of severe freezing is past but before growth has started.

If the growth of grapevines is rather weak during the first season, it is advisable to cut the vine back to one or two buds at the end of the first growing season and to train up a strong trunk during the second growing season. If the vine is to be trained to a fence or a two-wire system, it should be tied to a stake and carried upright until it reaches the top wire. At that point it should be pinched off and two laterals led out, one in either direction, along the wire. During the following season, lateral canes will grow from all the buds along the trunk. Two of these at the height of the first wire above the ground should be selected and tied to that wire to develop fruiting wood. The other branches along the trunk should be rubbed off or pinched back during the growing season.

In most cases, if properly cared for, the vines will begin to bear fruit the third year after planting and should continue to produce a satisfactory crop for many years thereafter.

Pruning should be done while the vines are in a dormant condition. It is important to note that the fruit is borne on shoots from the canes of the previous season's growth. In pruning, therefore, enough new wood should be saved to provide for the next summer's crop and the rest removed. With healthy, vigorous vines, 50 to 60 buds will produce as much fruit as the vine can mature properly. More wood may be left on vines for home production, provided sufficient space is available for the vine to develop. With vigorous vines, the leaving of more wood may result in a greater total quantity of fruit, but the individual bunches may be inferior in size and the fruit of poorer quality.

The pruning of raspberries and blackberries consists in cutting off the old canes close to the ground after the fruit has been picked; the new canes will then develop strong growth to produce fruit for the following season. In summer the tips of new shoots of black raspberries are pinched off at a height of 12 to 18 inches. Red raspberries are not cut back, but weak canes should be removed. In winter pruning, blackberry laterals are cut back to about 12 inches and those of black raspberries to about 8 inches. Canes 2 and 3 years old produce the most satisfactory gooseberries and currants. In general, the pruning of these fruits should be limited during the first 2 years to thinning out the bushes during the dormant season if more than 8 or 10 shoots have developed. After the planting is 3 or 4 years old a systematic cutting out of the oldest wood each season is desirable, leaving young shoots to replace this old wood.

SPRAYING.—For those who find it possible to spray in order to produce the best quality of tree fruits and grapes, the State agricultural college can furnish a spray program giving details of sprays and times of application.

